



Figs. 26, 27, 31.—*Selaginellites ariadnae*. Specimens showing the tangled and matted condition of the thread-like appendages.  $\times 97$ . Fig. 28.—*S. ariadnae*. A spore from which part of the appendages were removed so as to show the long thin appendages, with the broader funnel-form base.  $\times 97$ . Fig. 29.—*S. ariadnae*. A specimen from which the appendages and a portion of the wall were removed so as to show the triradiate clefths.  $\times 97$ . Fig. 30.—*S. ariadnae*. A view of the outer face of a spore showing the distribution, arrangement, and attachment of the appendages.  $\times 97$ .

*Selaginellites inornatus* sp. nov.

Body of exine round, 200–664  $\mu$  in diameter, the mean being 440  $\mu$ ; exine smooth, 5–18  $\mu$  thick; triradiate clefts extending a third to a half of the distance to the periphery, clefts slightly margined.—Skansen, east coast of Disko Island, Greenland; two miles inland at altitude of 140 meters; Upper Cretaceous. Figures 7, 8. This spore was the next most abundant *Selaginellites*, but was found generally in a broken or damaged condition.

*Selaginellites subrotundus* sp. nov.

Body of exine rounded-subdeltoid, 432–698  $\mu$  in diameter, the average being near 506  $\mu$ ; exine 30–40  $\mu$  thick; triradiate clefts with somewhat thickened margins, extending two thirds or more of the distance to the periphery; exine smooth.—Skansen, east coast of Disko Island, Greenland; two miles inland at altitude of 140 meters; Upper Cretaceous. Figures 4, 5. Although not as abundant as *S. inornatus* this spore was generally recovered in excellent condition. This may be because of its very thick exine. It resembles the former species very much, but differs in the thicker exine, larger size, and more deltoid shape.

*Selaginellites ariadnae* sp. nov.

Body of exine round, 150–316  $\mu$  in diameter, the mean being 233  $\mu$ ; triradiate clefts extending over half the distance to the periphery; body invested with 8–15 thread-like appendages, 3–4  $\mu$  in width, few to several times the diameter of the spore in length, base broad and funnel-form, apex blunt or rounded.—Skansen, east coast of Disko Island, Greenland; two miles inland at altitude of 140 meters; Upper Cretaceous. Figures 26–31. This is the predominating spore type recovered from the coal. It is usually entangled by the thread-like appendages, which sometimes completely hide the spore. It is only after untangling and straightening out the appendages that the real structure of the spore can be seen. The number of visible appendages depends upon the plane in which the spore was flattened, the fewest number being on the inner face of the spore.

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PALEONTOLOGY.—*Antillophyllia*, a new coral generic name.<sup>1</sup>

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The genus *Antillophyllia* may be defined as follows:

Corallum simple, turbinate, compressed turbinate, bilobate, or sub-cornute in form; attached at least in the earliest stages, pedicel minute or moderately large. Externally invested by a more or less complete, detachable epitheca. Costae distinct, moderately prominent, subequal or equal in size, margins with very regular, usually transversely compressed dentations. Septa numerous, with minutely dentate margins, the dentations frequently (if not always) papilliform in character. Margins of the larger septa divided by a sinus into an inner and outer lobe, the inner very narrow in the constricted portion of bilobate calices. Septal faces with fine opposed striations, along whose courses are granulations. The striations are finer on the inner than on the outer septal lobe. Columella not greatly developed, compressed in the plane of the greater diameter of the calice, vesicular. Dissepimental endotheca very abundant; exotheca frequently well developed, sometimes forming a wall outside of an inner wall which originates by the thickening of the sides of the septa.

*Type species*.—*Antillia lonsdaleia* Duncan from the Miocene of the Dominican Republic.

P. Martin Duncan (1864, p. 28) proposed the name *Antillia* and included in it four species, viz., *Montlivaultia ponderosa* Duncan (not Milne Edwards and Haime), *Antillia dentata* Duncan, *A. lonsdaleia* Duncan, and *A. bilobata* Duncan. He later added another species, *A. walli* (Duncan and Wall, 1865, p. 11). These five species represent two systematic groups of corals, one of which has coarsely dentate septal margins, contains the species wrongly identified as *Montlivaultia ponderosa* M. Edw. and Haime and *Antillia dentata* Duncan. It is related to the mussoid corals. The other group has septa with finely dentate margins and to it belong *A. lonsdaleia*, *A. bilobata*, and *A. walli*, all described by Duncan.

There was confusion at the start. Not only did Duncan include two different genera under *Antillia* when he first proposed the name, but he made a double misidentification of species. Comparison of photographs of the type of *Montlivaultia ponderosa* M. Edwards and Haime kindly sent me from the Museum of Natural History in

<sup>1</sup> Received August 16, 1932.

Paris shows that Duncan's *Montlivaultia ponderosa* from the Miocene of Bowden, Jamaica, is not *Montlivaultia ponderosa* Milne Edwards and Haime. I undertook to correct this error by naming the Bowden, Jamaica, species *Antillia gregorii* (Vaughan, 1901, p. 6). The specimens from the "Nivajé Shale," Dominican Republic, identified by Duncan as "*Antillia ponderosa*" is, as shown by an examination of the specimen studied by Duncan, not the same species as the Bowden "*Antillia ponderosa*," but is Duncan's *Antillia dentata* from the Dominican Republic. Duncan's *Antillia ponderosa*, therefore, included two species, neither one of which was *Montlivaultia ponderosa* M. Edwards and Haime.

J. W. Gregory (1895, p. 266) wrote as follows:

"The inclusion in the list of synonyms of a species which Duncan assigned to *Antillia* renders necessary a remark on this genus, and on the value of the epitheca in this group. The genus was founded by Duncan in 1864; he included in it a series of species agreeing in having an essential columella and a membraniform epitheca. The septa and costae are of two types: in some species, as in his type-species *A. ponderosa*, the septa are not lobed and the costae are coarsely dentate; in other species, such as *A. lonsdaleia*, the septa are lobed and the costae finely granulate. In his 'Revision' (p. 60) he reduces the genus to a subgenus of *Circophyllia*, and still bases its value on the epitheca.

The examination of a considerable series of specimens shows, however, that the epitheca is so very variable in this group that it does not appear worthy of even subgeneric value; the characters of the septa and costae seem much more important. In some specimens the epitheca is present and in others, quite rudimentary, and all stages can be seen between the two conditions. In this case the genus has to be split up into two. Duncan's type goes into *Lithophyllia*, and the *A. lonsdaleia* and some others go into *Circophyllia*."

In 1901 I wrote (Vaughan, 1901, p. 6):

"I am not sure that these two species (*Lithophyllia lacera* (Pallas) and *L. cubensis* (M. Edw. & H.) are really distinct; however, I am sure that *Antillia ponderosa* Duncan (*non*-Milne Edwards and Haime) is a distinct species and does not belong in the synonymy of *L. cubensis*. As Duncan wrongly identified the species with Milne Edwards and Haime's *Montlivaultia ponderosa*, it has no name. Therefore I propose to call it *Antillia gregorii*, *nom. nov.*"

The type species of *Antillia* is *Antillia gregorii* Vaughan, which is, as has been stated, Duncan's *Antillia ponderosa*, not *Montlivaultia ponderosa* Milne Edwards and Haime.

Reuss (1860, p. 216, pl. 1, figs. 10-12, pl. 2, fig. 10) described the genus *Syzygophyllia* from the eastern Hungarian Miocene. The type species is *S. brevis* Reuss (Vaughan, 1919, p. 424). *Antillia* Duncan, 1864, is a synonym of *Syzygophyllia* Reuss, 1860.

A few notes will be made on *Circophyllia*. Filliozat (1914, pp. 96-97) has said:

“Grace à la grande complaisance de M. le Professeur Joubin, j'ai eu depuis l'occasion d'examiner attentivement au Muséum les échantillons de *Circophyllia truncata* de la collection Milne Edwards. Je puis alors constater que la diagnose des auteurs présentait des lacunes de la plus haute importance et que mes spécimens de la ferme des Boves, à Parnes, décrits sous le nom de *Felixopsammia arcuata* [Filliozat, 1910, p. 804, pl. 14, figs. 7-11] devaient être identifiés à *Circophyllia truncata* E. H.”

From Filliozat's restudy of the type-species of *Circophyllia*, it is evident that none of the corals placed in *Antillia* by Duncan can be referred to *Circophyllia*, which is an Eupsammid genus. Duncan's *Antillia lonsdaleia*, *A. bilobata*, and *A. walli* are, therefore, without a proper generic designation.

I must now confess my own sins. Notwithstanding that it was known to me that the name *Antillia* was invalid, I applied it to species of corals as follows: *Antillia dubia* (Duncan) and *A. bilobata* Duncan (Vaughan, 1921, p. 115), *A. bilobata* Duncan (*idem*, p. 127), *A. dominicensis* Vaughan (*idem*, p. 152), *A. bilobata* Duncan and *A. walli* Duncan (*idem*, p. 157), *Antillia dominicensis* Vaughan (Vaughan and Hoffmeister, 1925, p. 324, pl. 3, fig. 9, pl. 4, figs. 1, 2, which are upside down), and *A. sawkinsi* Vaughan (Vaughan and Hoffmeister, 1926, p. 118, pl. 2, figs. 6, 6a).

I should accept responsibility for the misuse of the name by Hoffmeister (Vaughan and Hoffmeister, 1926, p. 119, pl. 2, figs. 7, 7a, 8, 8a) in his *Antillia bullbrookii* and by Faustino (1927, p. 152, pl. 37, figs. 2, 3) in his designation of *Antillia constricta* Brueg. *A. constricta* does not belong to the mussoid corals.

It is also probable that I misled Yabe and Sugiyama in their use of the name *Antillia*.

I shall not undertake a complete revision of the species that have been confused under *Antillia*, but I shall list the American species, the generic identification of which seems certain, and comments will be made on a few other species.

The species which belong to *Antillia* as represented by the type-species, but which are now referred to *Syzygophyllia*, because that is the older name, are as follows:

*Syzygophyllia gregorii* (Vaughan)  
*dentata* (Duncan)  
*hayesi* (Vaughan)

The American Miocene species which have been referred to *Antillia* and which are now placed in the genus *Antillophyllia* are as follows: